

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
1 September 2005 (01.09.2005)

PCT

(10) International Publication Number
WO 2005/080863 A2

(51) International Patent Classification⁷: **F21V 8/00**

(21) International Application Number:
PCT/JP2005/003087

(22) International Filing Date: 18 February 2005 (18.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2004-045463 20 February 2004 (20.02.2004) JP

(71) Applicant (*for all designated States except US*): **FUJI PHOTO FILM CO., LTD.** [JP/JP]; 210, Nakanuma, Minami-ashigara-shi, Kanagawa 2500193 (JP).

(72) Inventor; and

(75) Inventor/Applicant (*for US only*): **IWASAKI, Osamu** [JP/JP]; c/o Fuji Photo Film Co., Ltd., 200, Ohnakazato, Fujinomiya-shi, Shizuoka 4188666 (JP).

(74) Agents: **WATANABE, Mochitoshi** et al.; Hayakawa-tonakai Bldg. 3F, 12-5, Iwamoto-cho 2-chome, Chiyoda-ku, Tokyo 1010032 (JP).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *without international search report and to be republished upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: LIGHT GUIDE PLATE, AND PLANAR LIGHTING DEVICE AND LIQUID CRYSTAL DISPLAY DEVICE USING THE SAME

(57) Abstract: The transparent light guide plate includes a rectangular light exit surface, a thick portion positioned at substantially a central portion of the surface, thin edge portions formed in parallel on both sides of the thick portion, a parallel groove accommodating a bar-like light source and being formed at substantially a center of the thick portion and inclined rear portions whose thickness is reduced from the thick portion toward the thin edge portions. An end portion of the groove is narrowed toward the surface symmetrically to a center line of the groove in a sectional shape thereof according to a ratio of a peak value of illuminance or luminance of emitted light at a first portion of the surface corresponding to the groove to an average value thereof at second portions corresponding to the inclined rear portions. The planar lighting device includes the light guide plate. The liquid crystal display device includes the planar lighting device.



WO 2005/080863 A2